

REL Appalachia Ask A REL Response

Early Childhood, Literacy, Math
May 2020

Question:

What are evidence-based kindergarten readiness activities parents can do with their children at home?

Response:

Thank you for your request to our REL Reference Desk regarding evidence-based information about home-based kindergarten readiness activities. Ask A REL is a collaborative reference desk service provided by the 10 Regional Educational Laboratories (RELs) that, by design, functions much in the same way as a technical reference library. Ask A REL provides references, referrals, and brief responses in the form of citations in response to questions about available education research.

Following an established REL Appalachia research protocol, we searched for peer-reviewed articles and other research reports on kindergarten readiness activities parents can do with their children at home. We focused on identifying resources that specifically addressed the impact of these activities on children's kindergarten readiness. The sources included ERIC and other federally funded databases and organizations, research institutions, academic research databases, and general Internet search engines. For more details, please see the methods section at the end of this document.

The research team did not evaluate the quality of the resources provided in this response; we offer them only for your reference. Also, the search included the most commonly used research databases and search engines to produce the references presented here, but the references are not necessarily comprehensive, and other relevant references and resources may exist. References are listed in alphabetical order, not necessarily in order of relevance.

References

Cristofaro, T. N., & Tamis-LeMonda, C. S. (2012). Mother-child conversations at 36 months and at pre-kindergarten: Relations to children's school readiness. *Journal of Early Childhood Literacy*, 12(1), 68–97. Abstract retrieved from <https://eric.ed.gov/?id=EJ957329>; full text available at <https://research.steinhardt.nyu.edu/scmsAdmin/uploads/007/071/Cristofaro,%20T.%20&%20Tamis-LeMonda,%20C.%20S.,%20Jrnl%20of%20Early%20Child%20Lit.,%202012.pdf>

From the abstract: “The contributions of mothers’ and children’s oral language to children’s school readiness were longitudinally examined among 75 low-income mothers and children. When children were 36 months, mothers’ and children’s lexical diversity, mothers’ wh-questions, and children’s PPVT-III scores were assessed from play interactions. At pre-kindergarten, mothers and children shared a personal narrative, and various aspects of mothers’ and children’s narratives were coded. Children were assessed on their knowledge about print, letter-word identification, mathematical skills and sustained attention, and scores were combined into a single factor of school readiness. Structural equation analyses yielded two pathways to school readiness. Mothers’ wh-questions and lexical diversity predicted children’s PPVT-III scores at 36 months, which in turn predicted children’s school readiness. Mothers’ 36-month lexical diversity predicted mothers’ narrative prompts, which related to children’s narrative contributions. Children’s narrative contributions in turn predicted school readiness. Mother-child conversations support the school readiness of children from low-income backgrounds.”

- Jung, E. (2016). The development of reading skills in kindergarten influence of parental beliefs about school readiness, family activities, and children’s attitudes to school. *International Journal of Early Childhood*, 48(1), 61–78. Abstract retrieved from <https://eric.ed.gov/?id=EJ1098903>; full text available at https://www.researchgate.net/publication/296632248_The_Development_of_Reading_Skills_in_Kindergarten_Influence_of_Parental_Beliefs_About_School_Readiness_Family_Activities_and_Children%27s_Attitudes_to_School

From the abstract: “Children’s early home learning experiences are important influences on children’s adjustment and achievement in the early years of school. This study explores the relationships between parental beliefs about school readiness, family engagement in home learning activities, on children’s attitudes to school as reported by parents, and children’s reading achievement in kindergarten. The analyses draw on data from 3309 children who participated in the Early Childhood Longitudinal Study of Kindergartners. The analyses use structural equation modeling to test the influence of parent and family influences, including sociodemographic variables on children’s attitudes to school and children’s reading achievement in the kindergarten year. Analyses revealed that parents’ readiness beliefs and family activities were significantly related to children’s reading skills. Family activities were related to children’s attitudes about school, but these attitudes were not related to the development of reading skills. The findings suggest that higher engagement in shared parent-child activities may be an important focus in intentional efforts aimed at enhancing early reading achievement. Early childhood educators and other family practitioners can encourage parents to participate in home activities with their children because these activities encourage language interactions which are important to the development of children’s literacy.”

- Law, J., Charlton, J., McKean, C., Beyer, F., Fernandez-Garcia, C., Mashayekhi, A., & Rush, R. (2018). *Parent-child reading to improve language development and school readiness: A systematic review and meta-analysis*. Tyne, United Kingdom: Newcastle University. Retrieved from <https://eresearch.qmu.ac.uk/bitstream/handle/20.500.12289/9062/9062-Report.pdf?sequence=1>

From the executive summary: “For a number of years now population studies have shown us that parental book reading is an important feature of what is sometimes called the child’s Home Learning Environment (HLE). Evidence suggests that the more parents read to their children and the more books there are in the child’s home, the better a child will perform in terms of their later academic and social performance. This then raises the question of whether it is possible to provide interventions that promote early reading and whether those effects last. There have been a number of reviews of the intervention literature, but these have included a mixture of different types of studies and ages of children and have a variety of different foci. In this report we carry out a narrowly constrained systematic review focusing specifically on book reading interventions carried out specifically by parents and carers with preschool children (up to the age of five years) and looking primarily at the impact of parent child reading interventions on expressive language (use of language to convey meaning to others) and receptive language (understanding the words and language of others) and pre-reading skills.”

Linder, S. M., Ramey, M. D., & Zimbardo, S. (2013). Predictors of school readiness in literacy and mathematics: A selective review of the literature. *Early Childhood Research & Practice*, 15(1). Retrieved from <https://eric.ed.gov/?id=EJ1016152>

From the abstract: “This paper presents findings from a selective review of the literature related to predictors of school readiness in literacy and mathematics. School readiness was defined as what children are expected to know and do in a variety of academic domains and processes of learning prior to entering a formal classroom setting. Seven themes emerged, based on a review of selected empirical research published over a sixteen-year period. Twenty-four predictors of success for school readiness were categorized under these themes. Implications for practice and recommendations for future research are presented.”

Schaub, M. (2015). Is there a home advantage in school readiness for young children? Trends in parent engagement in cognitive activities with young children, 1991–2001. *Journal of Early Childhood Research*, 13(1), 47–63. Abstract retrieved from <https://eric.ed.gov/?id=EJ1049124>; full text available at <https://pdfs.semanticscholar.org/296e/dd28c087eef4bd6c4c6cda5f3c02dfad36b3.pdf>

From the abstract: “The desire to understand the ‘home advantage’ has spurred a large body of research describing the contribution of differences in family background and parenting styles to school readiness and the achievement gap. Using the National Household Education Survey at two time points provides a fuller picture of the trends in parenting and cognitive activities with young children before the onset of formal schooling. The results presented here show that although more educated parents participate more in cognitive activities with their young children in 1991 and 2001, participation is increasing for all parents. This is true for a widely expected parental activity, reading to your child, and for a direct instruction activity, teaching letters, words, and numbers. It is also true for the more creative activities of music, arts and crafts, and telling stories. Contrary to images of some families as deficient and others as overly exuberant, all families in this sample are increasing engagement with their young children in a range of cognitive activities aimed at school readiness because parents as well as children get socialized to the culture of schooling. Modern American

schooling requires parents to be engaged in the education process of their children and attempt to create advantage for them.”

Skwarchuk, S. L., Sowinski, C., & LeFevre, J. A. (2014). Formal and informal home learning activities in relation to children’s early numeracy and literacy skills: The development of a home numeracy model. *Journal of Experimental Child Psychology*, 121, 63–84. Retrieved from <https://pubmed.ncbi.nlm.nih.gov/24462995/>

From the abstract: “The purpose of this study was to propose and test a model of children’s home numeracy experience based on Sénéchal and LeFevre’s home literacy model. Parents of 183 children starting kindergarten in the fall (median child age = 58 months) completed an early home learning experiences questionnaire. Most of the children whose parents completed the questionnaire were recruited for numeracy and literacy testing 1 year later (along with 32 children from the inner city). Confirmatory factor analyses were used to reduce survey items, and hierarchical regression analyses were used to predict the relation among parents’ attitudes, academic expectations for their children, reports of formal and informal numeracy, and literacy home practices on children’s test scores. Parental reports of formal home numeracy practices (e.g., practicing simple sums) predicted children’s symbolic number system knowledge, whereas reports of informal exposure to games with numerical content (measured indirectly through parents’ knowledge of children’s games) predicted children’s non-symbolic arithmetic, as did numeracy attitudes (e.g., parents’ enjoyment of numeracy). The home literacy results replicated past findings; parental reports of formal literacy practices (e.g., helping their children to read words) predicted children’s word reading, whereas reports of informal experiences (i.e., frequency of shared reading measured indirectly through parents’ storybook knowledge) predicted children’s vocabulary. These findings support a multifaceted model of children’s early numeracy environment, with different types of early home experiences (formal and informal) predicting different numeracy outcomes.”

Additional Ask A REL Responses to Consult

Ask a REL Midwest at American Institutes for Research. (2018). *Defining and measuring school readiness*. Retrieved from <https://ies.ed.gov/ncee/edlabs/regions/midwest/askarel/2018/school-readiness.aspx>

Additional Organizations to Consult

Center on the Social and Emotional Foundations for Early Learning: <http://csefel.vanderbilt.edu/>

From the website: “The Center on the Social and Emotional Foundations for Early Learning (CSEFEL) is focused on promoting the social emotional development and school readiness of young children birth to age 5. CSEFEL is a national resource center funded by the Office of Head Start and Child Care Bureau for disseminating research and evidence-based practices to early childhood programs across the country.”

- Resources: Family Tools: <http://csefel.vanderbilt.edu/resources/family.html>

The National Association for the Education of Young Children: <https://www.naeyc.org/>

From the website: “The National Association for the Education of Young Children (NAEYC) is a professional membership organization that works to promote high-quality early learning for all young children, birth through age 8, by connecting early childhood practice, policy, and research.”

- School Readiness: <https://www.naeyc.org/our-work/families/school-readiness>

National Center on Improving Literacy: <https://improvingliteracy.org/>

From the website: “The National Center on Improving Literacy (NCIL) is a partnership among literacy experts, university researchers, and technical assistance providers, with funding from the United States Department of Education. Our Mission is to increase access to, and use of, evidence-based approaches to screen, identify, and teach students with literacy-related disabilities, including dyslexia.”

- Supporting Your Child’s Literacy Development at Home:
<https://improvingliteracy.org/brief/supporting-your-childs-literacy-development-home>

Reading Rockets: <https://www.readingrockets.org/>

From the website: “Reading Rockets is a national public media literacy initiative offering information and resources on how young kids learn to read, why so many struggle, and how caring adults can help. We bring the best research-based strategies to teachers, parents, administrators, librarians, childcare providers, and anyone else involved in helping a young child become a strong, confident reader. Our goal is to bring the reading research to life — to spread the word about reading instruction and to present ‘what works’ in a way that parents and educators can understand and use.”

- Empowering Parents:
https://www.readingrockets.org/sites/default/files/empparents_guide.pdf

Regional Educational Laboratory Midwest, Early Childhood Education Research Alliance:
https://ies.ed.gov/ncee/edlabs/regions/midwest/partnerships/midwest_early_childhood_education_research_alliance.aspx

From the website: “The REL Midwest Early Childhood Education Research Alliance (MECERA) brings together multiagency early childhood practitioners, policymakers, and researchers to increase the region’s capacity to access, conduct, interpret, and make sense of early childhood education research and to support the use of this research in decisionmaking at the state and local levels.”

- Equipping Parents to Support Kindergarten Readiness:
https://ies.ed.gov/ncee/edlabs/regions/midwest/events/archived_events/2017/may_17.aspx
[x](#)

Methods

Keywords and Search Strings

The following keywords and search strings were used to search the reference databases and other sources:

- (“K-readiness” OR “kindergarten readiness” OR “school readiness” OR readiness OR “kindergarten transition” OR “pre-K transition”) AND (parent* OR caregiver* OR famil*) AND (activit* OR “learning activit*” OR reading OR math) AND home

Databases and Resources

We searched ERIC, a free online library of more than 1.6 million citations of education research sponsored by the Institute of Education Sciences (IES), for relevant resources. Additionally, we searched the academic database ProQuest, Google Scholar, and the commercial search engine Google.

Reference Search and Selection Criteria

In reviewing resources, Reference Desk researchers consider—among other things—these four factors:

- Date of the publication: Searches cover information available within the last 10 years, except in the case of nationally known seminal resources.
- Reference sources: IES, nationally funded, and certain other vetted sources known for strict attention to research protocols receive highest priority. Applicable resources must be publicly available online and in English.
- Methodology: The following methodological priorities/considerations guide the review and selection of the references: (a) study types—randomized controlled trials, quasi experiments, surveys, descriptive data analyses, literature reviews, policy briefs, etc., generally in this order; (b) target population, samples (representativeness of the target population, sample size, volunteered or randomly selected), study duration, etc.; (c) limitations, generalizability of the findings and conclusions, etc.
- Existing knowledge base: Vetted resources (e.g., peer-reviewed research journals) are the primary focus, but the research base is occasionally slim or nonexistent. In those cases, the best resources available may include, for example, reports, white papers, guides, reviews in non-peer-reviewed journals, newspaper articles, interviews with content specialists, and organization websites.

Resources included in this document were last accessed on May 26, 2020. URLs, descriptions, and content included here were current at that time.

This memorandum is one in a series of quick-turnaround responses to specific questions posed by education stakeholders in the Appalachia region (Kentucky, Tennessee, Virginia, and West Virginia), which is served by the Regional Educational Laboratory Appalachia (REL AP) at SRI International. This Ask A REL response was developed by REL AP under Contract ED-IES-17-C-0004 from the U.S. Department of Education, Institute of Education Sciences, administered by SRI International. The content does not necessarily reflect the views or policies of IES or the U.S. Department of Education, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. government.